

CLAIMS

What is claimed:

1. A prosthetic orthopedic implant assembly comprising:
 - an implant body; and
 - an elastomeric cover connected to said implant body by a mechanical fastener.
2. The prosthetic orthopedic implant assembly according to claim 1, wherein the mechanical fastener comprises a tongue-and-groove connection.
3. The prosthetic orthopedic implant assembly according to claim 2, wherein the tongue-and-groove connection comprises at least one indentation on an exterior surface of the implant body and at least one protrusion on an interior surface of the elastomeric cover and wherein the at least one protrusion is received in the at least one indentation.
4. The prosthetic orthopedic implant assembly according to claim 3, wherein the at least one indentation comprises an annular groove on the exterior surface of the implant body.
5. The prosthetic orthopedic implant assembly according to claim 1, wherein the implant body is ball-shaped, wherein the elastomeric cover covers at least a portion of the ball-shaped implant body, and wherein the ball-shaped implant body includes a ridge encircling a portion of the implant body adapted to prevent said

elastomeric cover from becoming detached from an exterior surface of said implant body.

6. The prosthetic orthopedic implant assembly according to claim 1, wherein the implant body is ball-shaped and includes a tooth for contacting an inner surface of the elastomeric cover, wherein the elastomeric cover covers at least a portion of said ball-shaped implant body, and wherein the contact between the tooth and the inner surface of the elastomeric body forms a fluid-tight seal for preventing fluid from seeping between the elastomeric cover and the implant body.

7. The prosthetic orthopedic implant assembly according to claim 6, wherein the mechanical fastener comprises a tongue-and-groove connection between the implant body and the elastomeric cover, and wherein the tooth protrudes from a groove portion of the tongue-and-groove connection.

8. The prosthetic orthopedic implant assembly according to claim 1, wherein the mechanical fastener comprises a retaining ring for retaining the elastomeric cover in position on the implant body.

9. The prosthetic orthopedic implant assembly according to claim 8, wherein the retaining ring is secured to a non-articulating surface of the implant body with a mechanical fastener.

10. The prosthetic orthopedic implant assembly according to claim 8, wherein the retaining ring is formed with an at least partial annular ridge that mates with an

at least partial annular groove formed in at least one of the elastomer cover and the implant body.

11. The prosthetic orthopedic implant assembly according to claim 8, wherein the retaining ring permits local relative motion between the elastomeric cover and the implant body.

12. The prosthetic orthopedic implant assembly according to claim 1, wherein the implant body comprises a plate portion having at least one mounting member that protrudes from an interior surface thereof, and at least one fastener on an exterior surface thereof for fastening the elastomeric cover to the implant body.

13. The prosthetic orthopedic implant assembly according to claim 12, wherein the at least one fastener includes an at least partial annular lip spaced from the plate portion by an at least partially annular spacer ring, and the elastomeric cover comprises an inwardly facing lip that fits into a gap between the at least partially annular lip and the plate portion.

14. The prosthetic orthopedic implant assembly according to claim 13, wherein the at least partially annular lip, the plate portion and the at least partial spacer ring are formed of one integral body.

15. The prosthetic orthopedic implant assembly according to claim 13, wherein the at least partially annular lip, the plate portion and the at least partial spacer ring are formed of separate pieces, and the elastomeric cover comprises a partition wall that fits into a gap between separate pieces.

16. The prosthetic orthopedic implant assembly according to claim 12, further comprising an inner core positioned inwards of the elastomeric cover.
17. The prosthetic orthopedic implant assembly according to claim 16, wherein the inner core is constructed of a material with different properties than the elastomeric cover.
18. The prosthetic orthopedic implant assembly according to claim 17, wherein the inner core is made of a material that is more compliant and more resilient than the material of the elastomeric cover.
19. The prosthetic orthopedic implant assembly according to claim 1, wherein the mechanical fastener includes a threaded fastener that fastens the elastomeric cover to the implant body.
20. The prosthetic orthopedic implant assembly according to claim 19, wherein the threaded fastener comprises a threaded ring that mates with complementary formed threads on the implant body.